

The opinion in support of the decision being entered today is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JOSEPH HONEIN

Appeal 2007-1934
Application 09/993,443¹
Technology Center 3600

Decided: June 21, 2007

Before FRED E. McKELVEY, *Senior Administrative Patent Judge*, and
JAMESON LEE, and SALLY C. MEDLEY, *Administrative Patent Judges*.

MEDLEY, *Administrative Patent Judge*.

DECISION ON APPEAL

1 **A. Statement of the Case**

2 Applicants appeal under 35 U.S.C. § 134 from a final rejection of
3 claims 11-16. We have jurisdiction under 35 U.S.C. § 6(b).

1 Application for patent filed 19 November 2001. The real party in interest is the inventor Joseph Honein.

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Anguera ("Anguera '191)	US 2,567,191	Sept. 11, 1951
Anguera ("Anguera '395)	US 2,650,395	Sept. 01, 1953
Larsen	DK 84807	May 05, 1958
Lewis	US 3,992,767	Nov. 23, 1976
Anglehart	JP 01267002 A	Oct. 24, 1989

Claims 11-13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Anguera '191 in view of either Larsen or Anguera '395 and Lewis (9 March 2004 Rejection 2² and Answer 3).

Claims 14-16 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Anguera '191 in view of either Larsen or Anguera '395 and Lewis (Rejection 3 and Answer 3).

BACKGROUND

The invention relates to a method for forming a scaffolding plank from two or more wooden boards placed side by side. Each of the boards has a height which is the smallest dimension compared to the length and the width of each board (Specification 9, lines 12-15). Once the boards are placed side by side, the boards are compressed vertically and transversely. A drill and a pin press are positioned at opposite outside edges of the stack of wooden

² The 9 March 2004 rejection was not made final. However, the claims had been twice rejected, and therefore the appeal is proper. Bd.R. 31(a). The "9

boards. Holes are drilled transversely through the stack of wooden boards and then the pin press embeds at least three spaced apart helical shaped pins transversely through the opposing edge. Although independent claim 11 does not so specify, independent claim 14 further requires that the wood grains of the wooden boards alternate.

B. Issue

The issue is whether Applicant has shown that the Examiner erred in determining claims 11-16 to be unpatentable under 35 U.S.C. § 103(a) over the prior art.

C. Findings of fact (“FF”)

The record supports the following findings of fact as well as any other findings of fact set forth in this opinion by at least a preponderance of the evidence.

1. Applicants’ claims 11-16 are the subject of this appeal.

2. Claims 11 and 14 are as follows:

11. A method for forming a scaffolding plank from two or more wooden boards, comprising:

positioning a plurality of wooden boards in side to side abutment, each of said wooden boards including two sides and a lengthwise direction, each of said sides being flat and having a height and said height being the smallest dimension of said wooden boards; compressing said plurality of wooden boards vertically so that

March 2004 Rejection” is herein referred to as the “Rejection.”

1 the top surfaces of said plurality of wooden boards are co-planar and
2 concurrently compressing said plurality of wooden boards transversely
3 before revolvingly embedding at least three spaced apart helical pins;

4 positioning a drill at a lateral outside edge of said plurality of
5 wooden boards and a pin press at an opposite outside edge of said
6 plurality of wooden boards:

7 said drill having a drill axis;

8 said pin press having a pin press axis;

9 said drilling axis and said pin press axis substantially aligned;

10 drilling holes transversely through said plurality of wooden

11 boards

12 revolvingly embedding said at least three spaced apart pins
13 transversely through said plurality of wooden boards by forcing said
14 helical pins through said holes, normal to said sides of said plurality of
15 wooden boards, and normal to said lengthwise direction of said
16 plurality of wooden boards, each of said at least three spaced helical
17 pins having helical threads said helical pins having an outer thread
18 diameter and further having a root thread diameter, said drilled hole
19 having a hole diameter; and said hole diameter greater than said thread
20 root diameter and less than said outer thread diameter; and

21 subsequently removing the compression on said plurality of
22 wooden boards;

23 whereby said drilling step and said forcing step are sequentially

1 performed while said plurality of wooden boards are laterally and
2 vertically compressed and the helical threads of said plurality of helical
3 pins become anchored within each of said wooden boards thereby
4 fixing and maintaining said wooden boards in relative position.

5 14. A method of increasing the strength of a wooden scaffolding
6 plank comprising the steps of:

7 cutting said plank longitudinally into a plurality of wooden
8 plank sections; positioning said plurality of wooden plank sections in
9 side to side parallel abutment with the wood grains of said plurality of
10 wooden plank sections having alternating directions, each of said
11 wooden plank sections including two sides and a lengthwise direction,
12 each of said sides being flat and having a height and said height being
13 the smallest dimension of said wooden plank sections;

14 compressing said plurality of wooden boards vertically so that
15 the top surfaces of said plurality of wooden boards are co-planar and
16 concurrently compressing said plurality of wooden boards transversely
17 before revolvingly embedding at least three spaced helical pins;

18 positioning a drill at a lateral outside edge of said plurality of
19 wooden boards;

20 said drill having a drilling axis;

21 a pin press having a pin press axis;

22 said drilling axis and said pin press axis substantially aligned;

23 drilling holes transversely through said plurality of wooden

1 boards, said helical pins having an outer thread diameter and further
2 having a root thread diameter,
3 said drilled holes having a hole diameter; and
4 said hole diameter being greater than said thread root diameter
5 and less than said outer thread diameter;
6 revolvingly embedding said at least three spaced helical pins
7 transversely through said plurality of wooden plank sections by forcing
8 said helical pins through said holes, normal to said sides of said
9 plurality of wooden plank sections, and normal to said lengthwise
10 direction of said plurality of wooden plank sections, each of said at
11 least three spaced helical pins having helical threads; and
12 subsequently removing the compression on said plurality of
13 wooden boards;
14 whereby said drilling step and said forcing step are sequentially
15 performed while said plurality of wooden boards are laterally and
16 vertically compressed and the helical threads of said at least three
17 spaced helical pins become anchored within each of said plurality of
18 wooden plank sections thereby fixing and maintaining said wooden
19 plank sections in relative position.

20 Anguera '191

21 3. Anguera '191 describes a method for making a composite structure
22 adapted for floor paneling (col. 1:12-13).

1 4. Anguera '191 describes a machine for positioning a plurality of
2 wooden boards in side to side abutment, drilling holes through the plurality
3 of boards, and inserting pins having helical threads (Figs. 22 and 23) through
4 the holes in the plurality of boards (col. 2:41-44).

5 5. The Examiner found that Anguera '191 describes compressing the
6 boards vertically with clamp **53** (Answer 3).

7 6. The Examiner found that Anguera describes compressing the
8 boards transversely with clamp **34** (Answer 3).

9 7. Anguera '191 describes that clamp plate **34** transversely operates to
10 compress adjacent rows of boards together against stop plate **33**, while hold-
11 down clamps **52** and **53** compress the boards in a vertical direction during the
12 drilling and pinning operations (col. 3:55-70; col. 9:26-50).

13 8. The Examiner found that the claimed subject matter of claim 11 and
14 claim 14 differ from Anguera '191 in that Anguera '191 does not describe:

15 a) the claimed cross sectional shape of the boards (claim 11 and claim
16 14),

17 b) the substantially aligned drilling and pin press axes (claim 11 and
18 claim 14), and

19 c) alternating the wood grains of the side-by-side boards (claim 14)
20 (Rejection 2-3 and Answer 4).

Larsen or Anguera '395

9. The Examiner found that both Larsen and Anguera '395 describe boards having the claimed cross sectional shape to enable their use for scaffolding and a walking surface (Rejection 2 and Answer 4).

10. Larsen describes a walkway made up of a plurality of wooden boards (Larsen translation 1).

11. Anguera '395 describes a walking surface, or floor panel made up of a plurality of wooden boards (Anguera '395, col.2:49-53).

12. Anguera '395 shows in Fig. 1 a plurality of wooden boards in side by side relationship, where the height of each individual wooden board is the smallest dimension of each of the boards (see also Anguera '395, col. 3:1-3).

Lewis

13. The Examiner found that Lewis describes a method of locating the drilling and pin axes in an aligned manner (Rejection 2 and Answer 4).

14. Lewis describes the drill and dowel pin axes in a substantially aligned manner for drilling and pinning a plurality of wooden boards (crossties) (Lewis, col. 3:10-15, col. 3:59-67 and Fig. 2).

Anglehart

15. The Examiner found that Anglehart describes positioning wood grains of adjacent wooden boards in the opposite direction to resist warping (Rejection 3 and Answer 5).

16. Anglehart describes a door made of a plurality of tie plates of lumber.

1 17. The tie plates are arranged so that the wood grain of an adjacent
2 tie plate is directed in the opposite direction to avoid warping (Anglehart
3 abstract, Fig. 1 and Fig. 2).

4 *The Examiner's reasoning for combining the references*

5 18. The Examiner found that one skilled in the art would have used
6 the Lewis axially aligned drilling and pinning device to provide for a more
7 efficient time saving operation (Rejection 2).

8 19. The Examiner found that one skilled in the art would have used
9 the Anglehart method of arranging adjacent boards with wood grain of each
10 board in opposite direction in order to avoid warping and to thus strengthen
11 the composite structure (Rejection 3 and Answer 5).

12 *Applicant's arguments*

13 20. Applicant argues that:

14 a) Anguera '191's wood grain of each strip is aligned in the same
15 direction for each strip (plank) and thus fails to describe wood grains having
16 alternating directions (Br. 6);

17 b) Anguera '191 clamps the boards – which is not the same as
18 compressing the boards vertically and transversely as claimed (Br. 6);

19 c) Anguera '191 drills a bore, moves the work piece and then inserts a
20 pin, which is not the same as positioning the drill on an outside edge of the
21 boards and the pin press on the opposite outside edge of the boards, where
22 the drill and pin press axes are substantially aligned; and sequentially drilling

1 then pinning while the boards are laterally and vertically compressed (Br. 6-
2 8).

3 21. Applicant argues that Lewis does “suggest the currently boring
4 and pin insertion” but does not cure the deficiencies of (a-c) above (Br. 8).

5 22. Applicant argues that Larsen has no suggestion to any aspect of
6 the invention because it is not a permanent structure (can be easily
7 disassembled) and therefor is of only interest as “state of the art” (Br. 8).

8 23. Applicant argues that Anguera ‘395 teaches a metal key that is
9 driven into boreholes for joining adjacent boards together and adds nothing
10 to Anguera ‘191 (Br. 9).

11 24. Applicant argues that Anglehart³ glues its planks together instead
12 of pinning them together and that there is no showing that gluing is
13 equivalent to pinning (Br. 9).

14 25. Applicant argues that its claimed alternating of wood grain for the
15 purposes of increasing strength has nothing to do with Anglehart’s
16 alternating of wood grain for preventing warping (Br. 9).

17 26. Applicant also attacks the combination of the prior art references
18 and argues that (1) the Examiner’s statement that the steps are “obvious
19 mechanical expedients” is completely unsupported by any evidence; (2) the
20 Examiner provided no evidence of a teaching, suggestion or motivation
21 (TSM) to make the combination; (3) the combination has been made based
22 on hindsight (Br. 10-12).

3 Applicant calls this reference “JPN 002”.

D. Principles of Law

A claimed invention is not patentable if the subject matter of the claimed invention would have been obvious to a person having ordinary skill in the art. 35 U.S.C. § 103(a); *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. ___, 127 S. Ct. 1727, 82 USPQ2d 1385 (2007); *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1 (1966).

Facts relevant to a determination of obviousness include (1) the scope and content of the prior art, (2) any differences between the claimed invention and the prior art, (3) the level of skill in the art and (4) any relevant objective evidence of obviousness or non-obviousness. *KSR*, 82 USPQ2d at 1389, *Graham*, 383 U.S. at 17-18.

E. Analysis

Applicant groups claims 11-13 together and groups 14-16 together for argument purposes. However, with the exception of the opposing grain feature of claim 14, Applicant's arguments for both groups are the same. Thus, we treat the two groups together, and separately address the opposing wood grain argument.

At the outset, we note that Applicant exhausts much effort in explaining why each individual reference alone fails to meet the claimed invention (FFs 20-24). Attacking references individually, when the rejection is based on a combination of references is not particularly helpful. Nonobviousness cannot be established by attacking the references individually where the rejection is based upon the teachings of a combination

1 of references. *See In re Merck & Co.*, 800 F.2d 1091, 1097, 231 USPQ 375,
2 380 (Fed. Cir. 1986).

3 For example, Applicant's argument that Anguera '191 does not
4 describe positioning the drill and pin press on opposing edges of the wooden
5 boards with their respective axes substantially aligned is not helpful. The
6 Examiner acknowledged that the Anguera '191 drill and pin press are not
7 aligned as claimed, but explained that one of ordinary skill knew that
8 aligning the machines would expedite the process, citing to Lewis. Lewis
9 specifically describes aligning the drill and pin press as claimed (FFs 13, 14,
10 and 18). Even the Applicant acknowledges as much (FF 21). Thus, the
11 inquiry becomes would it have been obvious to combine Lewis and Anguera
12 '191, not whether each and every individual reference describes each and
13 every claimed limitation. The Examiner's rejection is based on obviousness,
14 not anticipation. For these reasons, Applicant's attack of the references
15 individually is without merit, and we need not and will not address
16 Applicant's arguments in that respect.

17 Applicant disagrees with the Examiner that Anguera '191 describes
18 compressing the boards vertically and transversely (FF 20(b)). The
19 Examiner found that Anguera's "clamping" includes "compressing" (FFs 5
20 and 6). Anguera '191 specifically describes "compressing" the stack during
21 both the drilling and pinning operations (FF 7). Clamp plate 34 transversely
22 operates to compress adjacent rows of boards together against stop plate 33,

1 while hold-down clamps **52** and **53** compress the boards in a vertical
2 direction during the drilling and pinning operations.

3 Anguera '191 uses the word "compress" in describing the function of
4 the clamps ("clamp plate **34** and the hold-down clamps **53** are operative to
5 compress the work," col. 3:64-66; "the work clamp is operative to laterally
6 compress the work for simultaneous drilling and pin driving operations" col.
7 6:36-38; "the clamp plate **34** is transversely operated to compress the
8 adjacent rows of strips together against the stop plate and simultaneously
9 with the operation of said clamp plate, hold-down clamps **52** and **53**
10 compress the strips in a vertical direction," col. 9:27-32). Based on the
11 record, Applicant does not sufficiently explain why Anguera '191 does not
12 function to compress the wooden boards as claimed.

13 The Applicant also argues that the combination made by the Examiner
14 was improper (FF 26). Applicant refers to the Examiner's conclusory
15 reasoning that the steps are "obvious mechanical expedients." The quoted
16 statement cannot be found in either the last rejection made by the Examiner
17 or in the Examiner's Answer. Instead, the Examiner did provide sound
18 reasons for making the combinations. For example, the Examiner found that
19 one of ordinary skill in the art knew that aligning the drill and pin press
20 opposite each other as described in Lewis would lead to a more efficient
21 process (FF 18). By aligning the axes of the drill and pin press as described
22 in Lewis, the work or stack of boards need not be urged forward to a second
23 position as in Anguera '191. In other words, the stack of boards stays in the

1 same location, which would be beneficial for the reasons given by the
2 Examiner. The Applicant has provided no evidence to the contrary.

3 The Anguera '395 or Larsen reference were relied on for the cross
4 sectional dimensions of the boards. One of ordinary skill in the art would
5 have known how to use the Anguera '191 and Lewis machines on any stack
6 of boards, regardless of their specific dimensions. Again, the Applicant has
7 failed to demonstrate that the Examiner's findings with respect to Larsen or
8 Anguera '395 are erroneous.

9 With respect to claim 14, the Examiner found that Anglehart describes
10 arranging side by side boards with opposing wood grain for the purpose of
11 strengthening and preventing warping. Applicant's attack on the Anglehart
12 reference as solving a different problem than the one Applicant is solving is
13 not persuasive, especially in light of *KSR*. ("In determining whether the
14 subject matter of a patent claim is obvious, neither the particular motivation
15 nor the avowed purpose of the patentee [here the applicants] controls. What
16 matters is the objective reach of the claim. If the claim extends to what is
17 obvious, it is invalid under § 103"). *KSR*, 127 S. Ct. at 1741-43, 82 USPQ2d
18 at 1397. The benefit described in Anglehart of alternating the grains of wood
19 need not be the same benefit realized by Applicant.

20 Lastly, Applicant argues that the Examiner's combination of
21 references was based on improper hindsight. "[A]ny judgment on
22 obviousness is in a sense necessarily a reconstruction based upon hindsight
23 reasoning, but so long as it takes into account only knowledge which was

1 within the level of ordinary skill at the time the claimed invention was made
2 and does not include knowledge gleaned only from applicant's disclosure,
3 such a reconstruction is proper." *In re McLaughlin*, 443 F.2d 1392, 1395,
4 170 USPQ 209, 212 (CCPA 1971). Here, the Examiner correctly relied on
5 the knowledge of the art and therefore the rejections were not based on
6 hindsight.

7 For the above reasons, we sustain the rejections made by the
8 Examiner.

9 **E. Decision**

10 Upon consideration of the record, and for the reasons given, the
11 Examiner's rejection of claims 11-13 under 35 U.S.C. § 103(a) as being
12 unpatentable over Anguera '191, in view of either Larsen or Anguera '395
13 and Lewis is affirmed.

14 The Examiner's rejection of claims 14-16 under 35 U.S.C. § 103(a) as
15 being unpatentable over Anguera '191, in view of either Larsen or Anguera
16 '395, Lewis and Anglehart is affirmed.

17 No time period for taking any subsequent action in connection with
18 this appeal may be extended under 37 C.F.R. § 1.136(a).

AFFIRMED

Appeal 2007-1934
Application 09/993,443

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